

In conclusion, I would draw the attention of herpetologists to these collections of Mascarene Tortoise remains now in the Zoological Museum at Cambridge, since they form the most complete series of specimens of these very interesting extinct reptiles.

On a small Collection of Crustacea made by EDWARD WHYMPER, Esq., chiefly in the N. Greenland Seas; with an Appendix on additional Species collected by the late British Arctic Expedition. By EDWARD J. MIERS, F.L.S. &c.

[Read November 20, 1879.]

THE North-European and Greenland seas have been so thoroughly explored by British and Scandinavian naturalists, that it was not to be anticipated that the collection of Crustacea made by Mr. Whympere would contain much of novelty or great rarity, more especially as he appears to have had but few opportunities of collecting, several, indeed, of the species having been obtained by purchase from Danish sailors and others. A considerable proportion of the species were, however, collected by Mr. Whympere at a single locality—Hare Island, north of Disco Island, in about 30 fathoms of water, concerning which I transcribe the following note:—

“I got three hauls of a dredge as the ship was drifting, and got an immense assemblage of beasts and fishes. These were the richest hauls I have ever made with a dredge. I had to throw away the greater part of the hauls, from the impossibility of preserving the specimens. Thousands of Echinoderms and Mollusks came up.”

It is very much to be regretted that the means of preserving the whole of the material dredged on this occasion did not exist; for, as it is, out of a total of twenty-seven species recorded below, no fewer than twelve were obtained at this locality, although unfortunately several of these are represented by but one or two examples in imperfect condition. The remainder of the collection chiefly consists of parasitic Isopoda and Copepoda and a few marine Copepoda obtained by washing from seaweed. The oceanic Copepoda are not included in the present Report, but have been submitted to Mr. Brady for examination.

The occurrence in fine condition of adult specimens of both sexes of the *Branchinecta arctica* of Verrill, affords me the opportunity of correcting an error in the figure of that species in my Report on the Crustacea collected by the naturalists of the late Arctic Expedition; and in an Appendix to the present paper I have added descriptions of two additional species collected in that expedition and not included in the Report.

The geographical range of species is given, except where I had previously noted it in my Report on the Arctic Crustacea; and some additional localities are cited from Prof. Smith's recently published "Report on the Crustaceans of the Atlantic Coast of N. America."

DECAPODA.

HYAS COARCTATUS.

Hyas coarctatus, Leach, *Linn. Trans.* xi. p. 329 (1815); *Mal. Pod. Brit.* pl. xxi. β , fig. 1 ♂, 2 ♀; *M.-Edw. Hist. Nat. Crust.* i. p. 312 (1834); *Bell, Brit. Crust.* p. 35 (1853); *Goës, Œfv. Vet.-Ak. Förhandl.* p. 161 (1863).

Lissa fissirostra, Say, *Journ. Ac. Nat. Sci. Phil.* i. p. 79 (1817); *Gibbes, Proc. Amer. Assoc.* p. 171 (1850).

Several specimens are in the collection from North Greenland; no definite particulars are recorded with respect to their habitat. This is a very widely distributed species, as it is known to occur on both the eastern and western coasts of the N. Atlantic, and its circumpolar distribution extends eastward to the Sea of Okhotsk, where a variety of this species has been found which has been designated "*alutacea*" by Brandt.

CRANGON (CHERAPHILUS) BOREAS.

Cancer boreas, Phipps, *Voy. North Pole*, p. 190, pl. xii. fig. 1 (1772).

Cancer homaroides, O. Fabr. *Fauna Grænlænd.* p. 241 (1780); *Mohr, Isl. Naturh.* p. 108. no. 245, pl. v. (1786).

Crangon boreas, Fabr. *Ent. Syst. Suppl.* p. 410 (1798); *M.-Edw. Hist. Nat. Crust.* ii. p. 342 (1837); *Krøyer, Nat. Tidsskr.* iv. p. 218, pl. iv. figs. 1-14 (1842-43).

Cheraphilus boreas, Kinahan, *Proc. Royal Irish Acad.* viii. p. 68 (1864); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4), xx. p. 57 (1877).

Hare Island, north of Disco Island (in about 30 fathoms), two males and four females. From Umenak, several specimens (some purchased of a Danish sailor, and said to have been taken from the "stomach of the frog-fish"). It is widely distributed

through the circumpolar seas; and S. I. Smith records it from several localities on the North-Atlantic American coast.

Mr. Kingsley, who is engaged upon a monograph of the North-American Caridea, and who has recently published, in the 'Bulletin of the Essex Institute,' vol. x., a most useful critical list of all the North-American species, is of opinion that the genus *Cheraphilus* as defined by Kinahan cannot be maintained, as "it has not a single character common to all the species to separate it from *Crangon*, as restricted by him." Even if this be the case, it does not follow that the name, having been published, should not be used with a slightly modified definition of the genus, more especially as the genus *Crangon*, even in the sense accepted by Sars, includes species so diverse in the sculpture of the carapace and postabdominal segments. In my Report on the Arctic Crustacea I adopted Kinahan's term *Cheraphilus*, as I considered it would be useful to retain it as a separate designation for those species of *Crangon* which, like *C. boreas* and *C. salebrosus*, Owen, are of very large size, with median and lateral series of spines on the cephalothorax, and with all the segments of the postabdomen longitudinally keeled above, in contradistinction to the smaller less robust species (e. g. *C. vulgaris*, *franciscorum*), in which the cephalothorax and postabdominal segments are nearly smooth. Nevertheless, not being acquainted with all the species, I retain the name here merely as a sectional division of *Crangon* in the sense indicated above; intermediate forms undoubtedly occur, and there is no modification in the structure of the limbs of the cephalothorax, such as exists, for instance, in the allied genus *Sabinea*, Owen.

HIPPOLYTE SPINUS.

Cancer spinus, Sowerby, *Brit. Miscel.* p. 47, pl. xxiii. (1806).

Hippolyte Sowerbei, Kröyer, *Monogr. Hippolyte's nord. Arter*, p. 90, pl. ii. figs. 45-54 (1842).

Hippolyte Sowerbyi, M.-Edw. *Hist. Nat. Crust.* ii. p. 380 (1837).

Hippolyte spinus, Bell, *Brit. Crust.* p. 284 (1855); Miers, *Ann. & Mag. Nat. Hist.* (ser. 4), xx. p. 59 (1877).

Two small specimens were dredged off Hare Island in the same rich haul in which so many of the species here noticed were obtained. One is a female with ova. In this specimen the two last teeth of the median dorsal crest are simple. In the other specimen the teeth of the dorsal carina are themselves denticu-

lated, and the minute denticules interposed between the teeth on the upper margin of the rostrum are far more numerous; there are four small teeth at the distal extremity of the rostrum, and one or two on the inferior margin. Compared with the much larger specimens obtained during the British Arctic Expedition, the denticulations are more numerous and the dorsal carina not so prominent; yet I do not doubt that the species are identical. On account of the variability of the rostral teeth, I am inclined to doubt the distinctness of *H. securifrons*, Norman (*H. Liljeborgi*, Danielssen and Boeck), from *H. spinus*. Many species, it has been observed, increase in size as they advance into the colder regions of the extreme north; and at the same time considerable variation may often be noted in the sculpture and armature of the body. In addition to the localities mentioned in my Report on the Crustacea of the Arctic Expedition, I may note that Stimpson and Smith record this species as common on the coasts of Maine and Massachusetts, and also in the Grand Manan.

HIPPOLYTE POLARIS.

Alpheus polaris, Sabine, *Append. Parry's 1st Voy.* x. p. 60, pl. ii. figs. 5-8 (1821).

Hippolyte polaris, Ross & Owen, *Append. Ross's 2nd Voy., Zool., Crust.* p. lxxxv (1835); *M.-Edw. Hist. Nat. Crust.* ii. p. 376 (1837); Krøyer, *Monogr. Hipp. nord. Art.* p. 116, pl. iii. figs. 78-81, pl. iv. (1842); Miers, *Ann. & Mag. Nat. Hist.* (ser. 4), xx. p. 61 (1877).

Hippolyte borealis, Owen, *Append. Ross's 2nd Voy., Cr.* p. lxxxiv, pl. B. fig. 3 (1835); Miers, *Ann. & Mag. Nat. Hist.* (ser. 4), xx. p. 61 (1877), ♂.

Several specimens were dredged off Hare Island. The only two perfect specimens have the rostra $\frac{5-6}{2}$ -toothed, and thus agree more nearly with Krøyer's diagnosis than do the specimens collected in the Polar Sea by the late British Arctic Expedition.

Prof. S. I. Smith, in his "Report on the Crustaceans of the Atlantic Coast," records the occurrence of this species on the coast of Labrador, Nova Scotia, and Massachusetts.

HIPPOLYTE GRÆNLANDICA.

Astacus grænlandicus, J. C. Fabr. *Syst. Ent.* p. 416 (1775).

Cancer aculeatus, O. Fabr. *Fauna Grænlandica*, p. 289 (1780).

Hippolyte aculeata, Owen & Ross, *Crust. in Append. Ross's 2nd Voy.* p. lxxxiii (1835); *M.-Edw. Hist. Nat. Crust.* ii. p. 380 (1837);

Kröyer, Monogr. Hippolyte's nord. Arter, p. 126, pl. iv. figs. 83-98, pl. v. figs. 99-104 (1842).

Hippolyte grœnlandica, Miers, Ann. & Mag. Nat. Hist. ser. 4, xx. p. 62 (1877), ubi synon.

Two specimens (male and female) were collected at Hare Island; and another male was purchased at Umenak of a trader. It occurs, according to Prof. Smith, on the Atlantic coast of Northern America. As in the case of the specimens collected by the late British Arctic Expedition, the male now before me is much smaller than the female.

PANDALUS BOREALIS.

Pandalus borealis, Kröyer, Nat. Tidsskr. 2 R. i. p. 469 (1844-45); *Voy. en Scand. Atlas, Crust.* pl. vi. fig. 2; *Goës, Œfv. Vet.-Akad. Förhandl.* p. 168 (1863).

One female individual is in the collection, purchased of a trader at Umenak, with *Cheraphilus boreas*. It is unfortunately mutilated, the rostrum being broken off at a short distance beyond the eyes; but there can be no doubt of its identity with Kröyer's species, with the description of which it agrees in all essential characters. This species is found eastward as far as the Sea of Okhotsk, where its occurrence is recorded by Brandt; and its occurrence in Massachusetts Bay and on the coast of Maine and Nova Scotia is recorded by Smith.

SCHIZOPODA.

MYSIS OCULATA.

Cancer oculatus, Fabr. Fauna Grœnland. p. 245. no. 222 (1780).

Mysis Fabricii, Leach, Trans. Linn. Soc. xi. p. 350 (1815).

Mysis oculata, Kröyer, Nat. Tidsskr. ii. p. 255 (1838-39), 3 R. i. pp. 13, 41 (1861); *Voy. en Scand. Atlas, Crust.* pl. viii. fig. 2; *Buchholz, Zweite deutsche Nordpolarf.* p. 284 (1874); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 63 (1877).

A single specimen was purchased of a Danish sailor at Umenak. It agrees with Kröyer's description and figure in all particulars, except that the lateral spinules on each margin of the telson are somewhat less numerous, about twenty-five instead of thirty-two; but this is probably a character varying with the age of the individual. Its length (excluding appendages) is about 8 lines.

CUMACEA.

DIASTYLIS RATHKII.

Cuma Rathkii, *Krøyer, Nat. Tidsskr.* iii. p. 513, pls. v. & vi. figs. 17-30 (1840-41), (N.R.) ii. pp. 144, 207, pl. i. figs. 4 & 6 (1846-49); *Voy. en Scand. Atlas, Crust.* pl. v. figs. 1 a-u.

Diastylis Rathkii, *G. O. Sars, Aberrante Krebsdyr. Cumacea, in Christ. Vidensk.-Selsk. Forhandl.* p. 160 (1864); *Svensk. Vetensk.-Akad. Handl.* ii. (No. 6) p. 7, pl. iii. figs. 8, 9 (1873).

A single individual was included among the species dredged off Hare Island in about 30 fathoms. Its length is about $6\frac{1}{2}$ lines. It is found on the Atlantic coast of Northern America and in the seas of South Greenland, Scandinavia, and Britain, but more abundantly in the higher latitudes, and is perhaps the most common of the northern species of this curious group.

ISPODA.

IDOTEA, sp. yg ?

There is in the collection a specimen, apparently referable to this genus, which, on account of its very small size and imperfect condition, cannot be made the type of a detailed specific description, yet seems to be quite distinct from all the species known to me. The head is comparatively large, the frontal margin with a very slightly prominent broad median lobe. The eyes (black) are placed in the middle of the lateral margins of the head. The sides of the body are parallel, the segments of equal width, the three last segments having the postero-lateral angles subacute. There are four perfectly distinct postabdominal segments, the first three very short; the terminal segment is triangulate in form, with the angles rounded, broadest at base, where it exceeds in breadth the preceding segments, and with the sides convergent to the distal extremity, which is broad and obtusely rounded. The antennules are apparently four-jointed; the antennæ have six joints exposed, the four first thickened, and the two terminal slenderer and more elongated; the terminal ends in a pencil of fine hairs. The legs are imperfect, but are armed with subterminal as well as a terminal claw. The operculiform caudal appendages are not oblong, but rather oval in shape, narrowing to the distal extremity. Length $1\frac{1}{2}$ line.

The only example collected was obtained by washing seaweed taken on the surface of the North mid-Atlantic in lat. $57^{\circ} 59' N.$,

long. $19^{\circ} 1'$ W., with a few specimens of larval Cirripedia. On account of its very small size, I doubt if this specimen can be regarded as adult; but should the characters given prove constant, it may be designated after its discoverer, *I. Whymperi*.

In the parallel sides of the body and the existence of three perfectly distinct tail-segments besides the terminal segment, it has much affinity with the *Idotea parallela*, S. Bate & Westwood, 'Brit. Sessile-eyed Crust.' ii. p. 391 (1868); but in that species (not to speak of other differences) the terminal segment has the sides parallel, and is semicircularly rounded at its distal extremity.

The *Idotea rugulosa* of Buchholz, 'Zweite deutsche Nordpolarf. Crust.' p. 285, 1874, note, from Spitzbergen, is also a species with subparallel sides, but has the terminal segment emarginate at its distal extremity.

Idotea bicuspidata, Owen, 'Cr. in Zool. of Capt. Beechey's Voyage,' p. 92, pl. xxvii. fig. 6 (1839), is at once distinguished by its more oval form and the emarginate tip of the terminal tail-segment.

ÆGA CRENULATA.

Æga crenulata, Lütken, *Naturhist. Foren. Vidensk. Meddelelser*, p. 70, pl. i. figs. 4, 5 (1858).

A specimen of this fine species is in the collection, which was purchased from a sailor at Umenak, who stated it to have been parasitic on a Greenland Shark. A specimen also from Greenland, in the British-Museum collection, presented some years ago by Mr. Whymper, is said to have been parasitic either on the Shark or the Cod.

Its length is no less than 2 inches $5\frac{1}{2}$ lines (60 millims.).

ÆGA PSORA, Linn.

Oniscus psora, Linn. *Syst. Nat.* (ed. xii.) i. p. 1060 (1766); Pennant, *Brit. Zool.* iv. pl. xviii. fig. 1 (1777).

Æga emarginata, Leach, Linn. *Trans.* xi. p. 370 (1815); *M.-Edw. Hist. Nat. Crust.* iii. p. 240 (1840); *Crust. in Cuv. R. A.* (ed. 3), pl. lxxvii. fig. 1.

Æga psora, Krøyer, *Danmarks Fiske*, 2nd deel, p. 40 (1843-45); Lütken, *Naturhist. Foren. Vidensk. Meddelelser*, p. 65 (1858); S. Bate & Westwood, *Brit. Sessile-eyed Crust.* p. 238 (1862).

Four specimens are in the collection, obtained with *Æ. crenulata*. The largest measures about 1 inch $7\frac{1}{2}$ lines. It is found in the British, Scandinavian, Icelandic, and Greenland seas; and

there is, according to Messrs. S. Bate and Westwood, a specimen from Nova Scotia in the Hopean Collection at Oxford.

AMPHIPODA.

HYPERIA MEDUSARUM.

- Cancer medusarum*, Müller, *Zool. Dan. Prodrum*, p. 148 (1776).
Cancer (*Gammarus*) *galba*, Montagu, *Linn. Trans.* xi. p. 4, pl. ii. fig. 2 (1815).
Hyperia Latreillei, M.-Edw. *Hist. Nat. Crust.* iii. p. 76, pl. xxx. fig. 16 (1840).
Hyperia galba, S. Bate, *Cat. Amphip. Brit. Mus.* p. 292, pl. xlviii. fig. 9 (1862); S. Bate & Westwood, *Brit. Sessile-eyed Crust.* ii. p. 12 (1868).
Hyperia medusarum, S. Bate, *Cat. Amphip. Crust. Brit. Mus.* p. 295, pl. xlix. fig. 1 (1862); Boeck, *Skandin. og Arktiske Amphip.* p. 79, pl. i. fig. 1 (1872), ubi synon.

A single adult female individual was obtained from a Danish trader at Niakornet.

The synonyma of this species, which appears to be as variable as it is common, is given at such length by Boeck (*l. c.*), that it appears unnecessary to reproduce it in full; and I must refer to his work for further information on the subject. It is commonly distributed throughout the N. Atlantic, British, Scandinavian, and Greenland seas.

ANONYX NUGAX.

- Cancer nugax*, Phipps, *Voy. North Pole, Append.* p. 192, pl. xii. fig. 2 (1774).
Anonyx lagena, S. Bate, *Cat. Amphip. Crust. Brit. Mus.* p. 77, pl. xii. fig. 7, ♀ (1862); Boeck, *Skand. og Arktiske Amphip.* p. 152 (1872).
Anonyx nugax, Miers, *Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 96 (1877), ubi synon.

This common species is represented in the collection by three individuals collected, with so many other species, with the dredge off Hare Island.

ONESIMUS EDWARDSII.

- Anonyx Edwardsii*, Krøyer, *Nat. Tidsskr.* 2 R. ii. pp. 1, 41 (1846); *Voy. en Scand., Crust. Atlas*, pl. xvi. fig. 1.
Onesimus Edwardsii, Boeck, *Skand. og Arktiske Amphip.* ii. p. 167, pl. vi. fig. 4 (1876); Miers, *Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 99, pl. iii. fig. 3 (1877).

I refer here, with some hesitation, a number of small specimens obtained by the dredge off Hare Island. The colour of the eyes is indistinguishable in all the specimens. The terminal segment appears to vary somewhat as to the degree of its distal emargination. These specimens agree, however, in all respects with those described by me in the Report on the late Arctic Expedition.

LAPHYSTIUS STURIONIS.

Laphystius sturionis, Krøyer, *Nat. Tidsskr.* iv. p. 157 (1842); Lilljeborg, *Øfv. Vet.-Akad. Förhandl.* p. 132 (1855); S. Bate, *Cat. Amphip. Crust. Brit. Mus.* p. 110 (1862).

Laphystius sturionis, Boeck, *Skandin. og Arktiske Amphip.* ii. p. 252, pl. xix. fig. 6 (1876); Schiödte, *Nat. Tidssk.* 3 R. x. p. 237, pl. v. figs. 9-18 (1876).

Darwinia compressa, S. Bate, *Brit. Assoc. Rep.* p. 58 (1855); *Cat. Amphip. Crust. Brit. Mus.* p. 108, pl. xvii. fig. 7 (1862); S. Bate & Westwood, *Brit. Sessile-eyed Crust.* i. p. 184 (1863).

This species was parasitic on a species of Cod caught by line in 100 fathoms in the North Sea in lat. 58° 53' N., long. 1° 2' E. Unlike the *Caligus curtus*, parasitic on the same animal (which was distributed over the body of the fish), this species was found only behind the pectoral fins at their bases; and was, as Mr. Whymper notes, sluggish in its movements compared with the other. Only a few specimens were preserved, the adults being females. It has been recorded, as Boeck notes, in the seas of Norway, Denmark, and Britain; but its range does not, as far as I am aware, extend northward to the coast of Greenland.

ÆDICERUS LYNCEUS.

Ædicerus lynceus, M. Sars, *Forhandl. Vidensk.-Selsk. Christiania*, p. 143 (1858); S. Bate, *Cat. Amphip. Crust. Brit. Mus.* p. 372 (1862); Boeck, *Skand. og Arktiske Amphip.* ii. p. 259, pl. xiii. fig. 4 (1876).

Ædicerus arcticus, Danielssen, *Nyt Mag.f. Naturvidensk.* p. 7 (1857).

Ædicerus propinquus, Goës, *Øfv. Vet.-Ak. Förhandl.* p. 526, fig. 19 (1865).

Two specimens are in the collection (one in much mutilated condition), obtained in the dredge-haul off Hare Island in 30 fathoms.

They agree with the descriptions of the species in the form of the body and limbs, the absence of the spur-like prolongation of the wrist of the first pair of legs, and all other characteristics.

The rostrum, which is obtusely rounded at its apex, has at the apex on the lower margin an almost imperceptible point. It is found in the seas of Spitzbergen, Greenland, Iceland, and Norway.

ATYLUS CARINATUS.

Gammarus carinatus, *Fabr. Ent. Syst.* ii. p. 515 (1793).

Atylus carinatus, *Leach, Zool. Miscell.* iii. p. 22, pl. lxix. (1815); *M.-Edw. Hist. Nat. Crust.* iii. p. 68 (1840); *S. Bate, Cat. Amphip. Crust. Brit. Mus.* p. 134, pl. xxv. figs. 1-3 (1862); *Buchholz, Crust. in Zweite deutsche Nordpolarf.* p. 357, pl. x. (1874); *Boeck, Skandinaviske og Arktiske Amphipoder*, ii. p. 324 (1876); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 100 (1877).

Amphitho carinata, *Kröyer, Kongl. Danske Vid. Selsk. Afh.* vii. p. 256, pl. ii. fig. 6 (1838); *Voy. en Scand., Atlas, Crust.* pl. xi. fig. 1; *M.-Edw. Hist. Nat. Crust.* iii. p. 41 (1840).

A good series of specimens was dredged from a boat at Noursak at about 20 fathoms.

It is to be noted that these specimens are all of moderate or even small size, very much smaller than the specimens obtained by the British Arctic Expedition.

GAMMARUS LOCUSTA.

Cancer locusta, *Linn. Syst. Nat.* (ed. xii.) p. 1055 (1766).

Gammarus locusta, *Fabr. Ent. Syst.* ii. p. 516 (1793); *M.-Edw. Hist. Nat. Crust.* iii. p. 44 (1840); *S. Bate, Cat. Amphip. Crust. Brit. Mus.* p. 206, pl. xxxvi. fig. 6 (1862); *Boeck, Scand. og Arktiske Amphip.* ii. p. 366 (1876); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 101 (1877), ubi synon.

An adult female is in the collection, taken in the rich haul off Hare Island.

Several specimens were also washed out of seaweed floating on the surface of the sea at the entrance to Davis Straits, lat. 63° 27' N., long. 54° 12' W., with specimens of a species of Copepod (*Thales-tris serrulata*, Brady).

Mr. Whympers notes that the species in this tube "lived in fresh water, and were as lively in it as in salt water."

The specimens taken from the seaweed are probably none of them fully adult, and some are quite young. In these, the eyes are oval, not uniform in shape; the fasciculi of hairs (in the larger specimens) on the dorsal surface of the fourth to the sixth postabdominal segments are long and slender, there are two hairs in the middle and two or three in each lateral fasciculus; the

accessory flagellum of the antennules is about 5-jointed, and terminates in a slender filament.

AMPELISCA ESCHRICHTII.

Ampelisca Eschrichtii, *Krøyer, Nat. Tidssk.* 1 R. iv. p. 155 (1842)
Boeck, Skand. og Arktiske Amphipoder, pt. 2, p. 528, pl. xxxi. fig. 7
(1876); *Buchholz, Crust. in Zweite deutsche Nordpolarf.* p. 375,
pl. xiii. fig. 1 (1874).

Ampelisca ingens, *S. Bate, Cat. Amphip. Crust. Brit. Mus.* p. 92, pl. xv.
fig. 2 (1862).

A mutilated specimen is in the collection, dredged off Hare Island in 30 fathoms, with the greater number of the species collected. Its range extends from the Scandinavian seas, through those of Iceland and Greenland, to the coasts of Labrador and the Grand Manan.

EUSIRUS CUSPIDATUS.

Eusirus cuspidatus, *Krøyer, Nat. Tidsskr.* 2 R. i. p. 501 (1844-45);
Voy. en Scand. pl. xix. fig. 2; *S. Bate, Cat. Amphip. Crust. Brit. Mus.* p. 154, pl. xxviii. figs. 6, 7 (1862); *Buchholz, Zweite deutsche Nordpolarf. Crust.* p. 313, pl. iii. fig. 2 (1874); *Boeck, Skandin. og Arktiske Amphipoder*, pt. 2, p. 502 (1876); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4) xix. p. 137 (1877).

A single individual (female with ova) was dredged off Hare Island. It has been found in the seas of Scandinavia, Spitzbergen, and Greenland.

CAPRELLA SEPTENTRIONALIS.

Squilla lobata, *O. Fabr. Fauna Grænl.* p. 248 (1780), *nec Müller.*
Caprella septentrionalis, *Krøyer, Nat. Tidsskr.* iv. p. 590, pl. viii. figs. 10-19 (1843); *Voy. en Scand.* pl. xxv. fig. 2; *S. Bate, Cat. Amphip. Crust. B. M.* p. 355, pl. lvi. fig. 3 (1862); *Boeck, Skandinav. og Arktiske Amphip.* p. 696 (1876).

Caprella cercopoides, *White, in Sutherland's Journ., Crust.* p. 207 (1852).

A large number of specimens were dredged from a boat at Noursak at about 20 fathoms. It is probably common in the seas of Scandinavia, Spitzbergen, and Greenland.

CYAMUS NODOSUS.

Cyamus nodosus, *Lütken, Kong. Dansk. Vidensk. Selsk. Skrift.* 5 R. x. p. 274, pl. iv. fig. 8 (1873).

A large number of specimens, including males, females, and young, of this parasite of the Narwhal (*Monodon monoceros*) were

obtained of a Danish sailor at Umenak, who stated that they were parasitic on the nose around the horn, and that they were found only at Umenak ; but this is certainly erroneous.

CYAMUS MONODONTIS.

Cyamus monodontis, *Lütken, l. c.* p. 256, pl. i. fig. 2 (1873).

This species, like the *C. nodosus*, is parasitic on the Narwhal, but only a few specimens obtained with the preceding have been preserved. These are very easily to be distinguished by the broader, more flattened segments of the body, which are not roughened and longitudinally sulcated as in *C. nodosus*, and the coxæ of the joints of the fifth to seventh legs are not armed with a spine as in that species. Some of the examples collected are, moreover, larger than any of *C. nodosus* obtained by Mr. Whymper.

PHYLLOPODA.

BRANCHINECTA ARCTICA.

Branchipus (*Branchinectus*) *arcticus*, *Verrill, Amer. Journ. Sci. & Arts* (ser. 2), xlviii. p. 253 (1869); *Miers, Ann. & Mag. Nat. Hist.* (ser. 4) xx. p. 105, pl. iv. fig. 1 (1877).

Branchinecta arctica, *Packard in Hayden, U. S. Geol. & Geogr. Survey*, p. 621 (1874); *Amer. Naturalist*, xi. p. 53 (1877).

A good series of specimens, males and females (several fully grown), were taken by hand by Mr. Whymper in stagnant pools near Godhavn Harbour. They agree very well with Verrill's original description (which I had not seen when I wrote the Report on the Crustacea of the Arctic Expedition last year); the second joint of the claspers in the male are bluntly pointed at the tip. They are even larger than the specimens collected by Verrill, attaining a length of 23 millims.

The examination of this series has shown that of the few individuals collected at Discovery Bay, none are nearly fully-grown, nor are there any females among them. It is not impossible that they may prove to be a distinct species, as suggested by me in my Report, on account of the straighter claspers (the basal joint of which has fewer teeth, and the second is less slender), the shorter, broader-lanceolate caudal appendages, &c. ; but more and larger specimens are needed for comparison. In the specimen figured by me the male genital appendages are incorrectly drawn. The ovary is very long and narrow, considerably exceeding half

the abdomen in length, and so different from that of *Branchipus* (*B. stagnalis*) that I cannot doubt of the generic distinctness of *Branchinecta*. The terminal joint of the claspers in the female is very much abbreviated. The external male genital appendages are slender, and armed with a curved spine-like fleshy process near the base.

COPEPODA PARASITICA.

CALIGUS CURTUS, Müller.

Caligus curtus, O. F. Müller, *Entomotr.* p. 130, pl. xxi. figs. 1-2, ♀ (1785); Krøyer, *Nat. Tidsskr.* i. p. 619, pl. vi. fig. 2 (1837); Steenstrup & Lütken, *Dansk. Vidensk. Selsk. Skrift.* (5) v. p. 363 (1861); Olsson, *Prodr. Copepod. parasitant. Scand., in Acta Universitat. Lund.* p. 6 (1868), ubi synon.

Several specimens, including both males and females, were taken from a species of Cod caught by line in 100 fathoms in the North Sea in lat. 58° 53' N., long. 1° 2' E., and, unlike the *Laphystius sturionis*, occurring on the same fish, this species was distributed over the whole body of the animal.

DINEMATURA FEROX.

Dinematura ferox, Krøyer, *Nat. Tidsskr.* ii. p. 40, pl. i. fig. 5 (1838-39); Steenstrup and Lütken, *Dansk. Vidensk. Selsk. Skrift.* (ser. 5) v. p. 376, pl. vii. fig. 14 (1861); Olsson, *Acta Universitat. Lundensis*, p. 17 (1868).

Three specimens were obtained in the rich haul off Hare Island, and two were taken from the "Greenland Shark" at Umenak. Mr. Whympfer notes that they are usually, but not always, found attached to the eyes of the fish. The specimens are in fine condition.

LERNÆOPODA ELONGATA.

Lernæa elongata, Grant in Brewster's *Edinb. Journ. of Sci.* vii. p. 147, pl. ii. fig. 5 (1827).

Lernæopoda elongata, Nordmann, *Mikr. Beitr.* p. 99 (1832); Krøyer, *Nat. Tidsskr.* i. p. 259, pl. ii. fig. 12, pl. iii. fig. 3 a-k (1837); M.-Edw. *Hist. Nat. Crust.* iii. p. 515 (1840); Baird, *Brit. Entomostraca*, p. 333, pl. xxxv. fig. 5 (1849); Steenstrup & Lütken, *Vidensk. Selsk. Skrift.* (ser. 5) v. p. 422, pl. xv. fig. 37, ♂ ♀, yg. (1861); Olsson, *Copepod. Scandinaviæ, in Acta Universitat. Lund.* p. 37 (1868).

Four female specimens in fine condition of this well-known

species were bought of a Danish sailor at Umenak, who had taken them from the "eye of the Greenland Shark," the situation in which they are always parasitic.

A specimen of a second small species of this genus is in the collection, said to have been taken from the gills of a Trout, and closely allied to, if not identical with, *L. salmonea* or *L. Edwardsii*; as, however, it is in imperfect condition, and the *bullæ* terminating the arms is wanting, it cannot be identified with certainty.

APPENDIX.

Notice of two Additional Species collected during the British Arctic Expedition in 1875-76.

A box containing Invertebrata collected by naturalists of the late British Arctic Expedition was brought to the British Museum, after the various groups had been distributed to the naturalists entrusted with the working out of the collections, and after my report on the Crustacea had been published. It contained several species from Discovery Bay, among them some additional specimens of *Munnopsis typica* dredged in 30 fathoms, and the following species, which were not represented in the collections previously examined.

NYPHON ROBUSTUM.

Nymphon robustum, Bell, in *Belcher, Last of the Arctic Voyages*, ii. *Crust.* p. 409, pl. xxxv. fig. 4 (1855).

A single individual (adult female with ova) was taken at Discovery Bay, in 30 fathoms, off specimens of Crinoids, which I do not hesitate to refer to this species. It is of large size (length between legs when fully extended nearly 4 in.). It is distinguished from *N. hirtum*, which occurred abundantly in the same locality, and more particularly from the variety described by me (*Ann. Nat. Hist.* 1877, xx. p. 109, pl. iv. fig. 3) as *obtusidigitum*, by the *chelæ*, which have the palmar portion very short and globose, and the fingers long, slender, arcuated, and acute at the tips. Moreover, the whole animal is clothed with a pubescence so short as to be scarcely discernible by the naked eye (on which account, I suppose, the legs are described by Bell as "quite naked"), while in *N. hirtum* and *obtusidigitum* the hairs that cover the animal are long. Bell's examples were obtained in Northumberland Sound, in 33 fathoms.

BALANUS CRENATUS.

Balanus crenatus, Bruguière, Darwin, *Monogr. Cirripedia, Balanidæ*, p. 261, pl. vi. fig. 6 (1854).

I refer here, but with some hesitation, a small specimen collected in Discovery Bay at 30 fathoms. The shell is regularly and steeply conical, white, the compartments smooth, without longitudinal carinæ, except one, rather obscure, on the carinal valve; the radii are very oblique, the opercular valves much thinner than is usual in *B. crenatus*; the *scutum* has, however, scarcely any trace of an adductor ridge, and the spur of the *tergum* is rounded, but rather longer than in Darwin's figure of that of *B. crenatus*, and placed at rather less than its own width from the horizontal angle. The walls of the shell are internally ribbed. Specimens of *B. porcatus* were collected at the same locality in 20 fathoms.

On a Synthetic Type of Ophiurid from the North Atlantic.

By Prof. P. MARTIN DUNCAN, F.R.S., F.L.S., &c.

[Read December 4, 1879.]

(PLATE III.)

THERE is a very remarkable Ophiuran which forms part of a collection obtained by Dr. Wallich, during his voyage in H.M.S. 'Bulldog' in the year 1860, off the coast of East Greenland. The Ophiuran was presented by him to the Royal Microscopical Society, and I have been permitted to examine and describe it.

At first sight, the little form might be considered to be an Amphiuuran of the *Hemipholis* group, but a glimpse at the upper part of the disk and at the sides of the arms discovers a spinulose condition of the upper surface of the first and a hooked arrangement of the latter structures. The resemblance to species of *Ophiothrix* then becomes more or less striking; but the large scaling of the disk, the absence of the tooth-papillæ, and the presence of accessory pieces around the aboral edge of the upper arm-plates are distinctive characters, which are, to a certain extent, suggestive of Ophiolepian and Ophiopholian affinities. Nevertheless the dental apparatus does not resemble that of these last genera. There is much in the form under consideration which recalls the shape and spinulation of *Ophionyx*, M. & T.; but the absence of tooth-papillæ and the presence of accessory plates to, and